CITRUS ADVANCED TECHNOLOGY PROGRAM

QUARTERLY & FINAL PROGRESS REPORT FORM: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

▶**PROJECT QUARTER END** April 2022 ◉ *Quarterly Report* ○ *Final*

Proposal Title

Reducing fruit drop by altering hormonal responses within the tree through nutritional and hormonal therapies: a mechanistic affordable approach

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
05/19/2022	Citrus Research and Development Foundation	Horticultural & Management

ABSTRACT (Executive Summary-public report-do not disclose proprietary information or intellectual property)

1. Please state project objectives and what work was done this quarter to address them:

Specific objectives are:

1) To determine the right timing for Zn and K treatments to minimize fruit drop.

2) To determine effects of GA3 and 2,4D applications on fruit retention when applied at different times during fruit development.

3) To develop a strong and proactive outreach program.

During this initial quarter, for objectives 1 and 2 we have identified the trees from Hamlin and Valencia in Central and Southwest Florida that we will be using in our studies, flagged them and organized them in a completely randomized block design. We have also taken baseline initial data on HLB severity ratings, tree height, canopy volume, leaf area index, and scion and rootstock diameters. Also, leaf samples for nutrient analysis and determination of initial Ct values for HLB have been taken.

For objective 2, GA3 and 2,4D treatments have already started. For objective 1, we are starting first set of treatments by the end of May.

Objective 3: Outreach

-F. Alferez, Foliar applications of Zinc and Potassium to increase yield by reducing fruit drop in Hamlin oranges. 2022 Florida Citrus Growers' Institute, Avom Park April 5, 2022.

-T. Vashisth, Update on Gibberellic acid studies.2022 Florida Citrus Growers' Institute, Avom Park April 5, 2022.

-T, Vashisth and F. Alferez., wokshop by zoom on "gibberellic acid research update and other PGRs for Florida citrus". 217 registered participants.

2. Please state what work is anticipated for next quarter:

In the second quarter, we will perform first set of treatments for objective 1 in both Valencia and Hamlin trees and continue with data collection. Treatments for objective 2 will continue as planned (applications every 45 days). Importantly, a new PhD student, Dyvia Aryal, Ms graduated from University of Hannover, Germany, will join the project in June-July, to conduct studies on this project under Dr Alferez supervision

PI First Name Fernando

PI Last Name Alferez

Email alferez@ufl.edu

Phone 2396583426

Organization UF/IFAS

Sponsor Project Number 21-007

Project Duration (years) 3 *Year of Project* 1

% Completion of Objectives (FDACS requirement) 5.00%

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.